

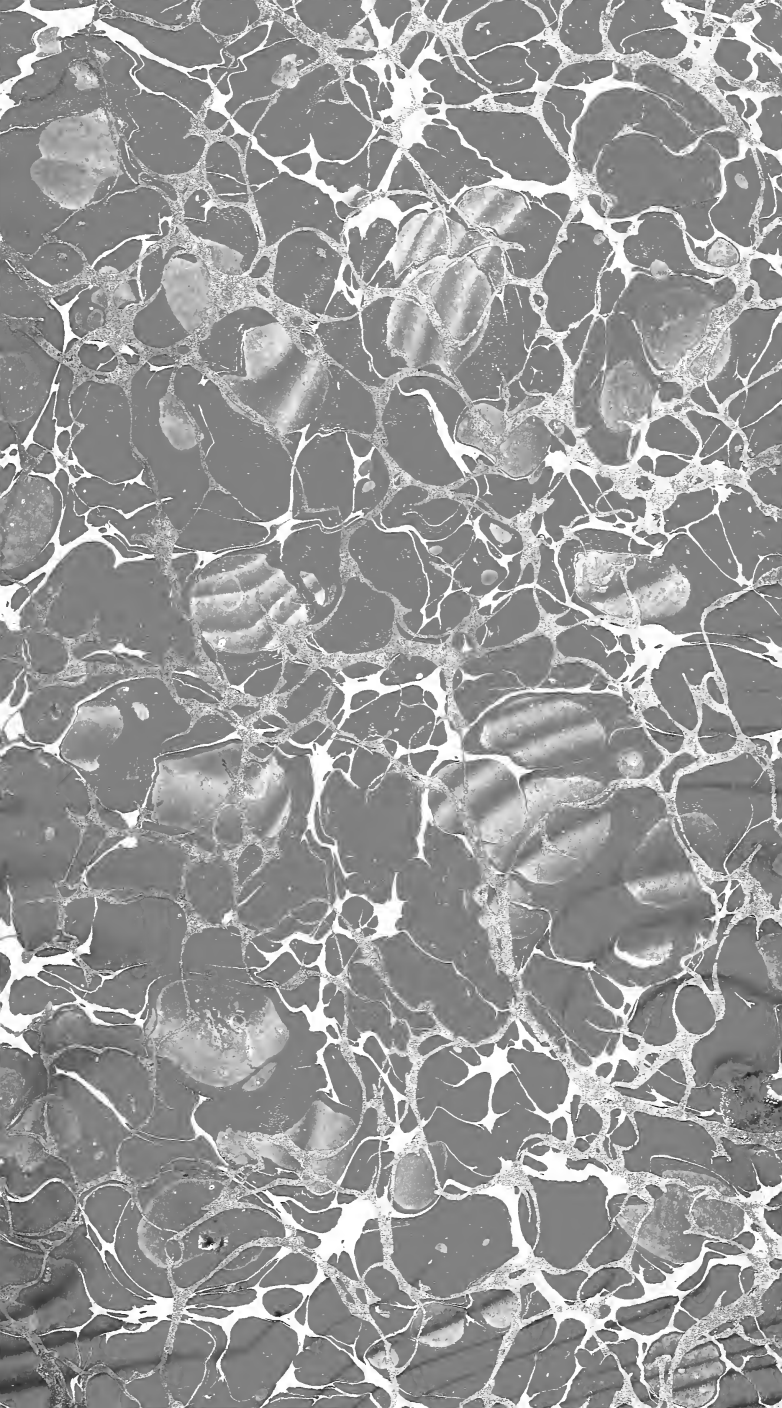
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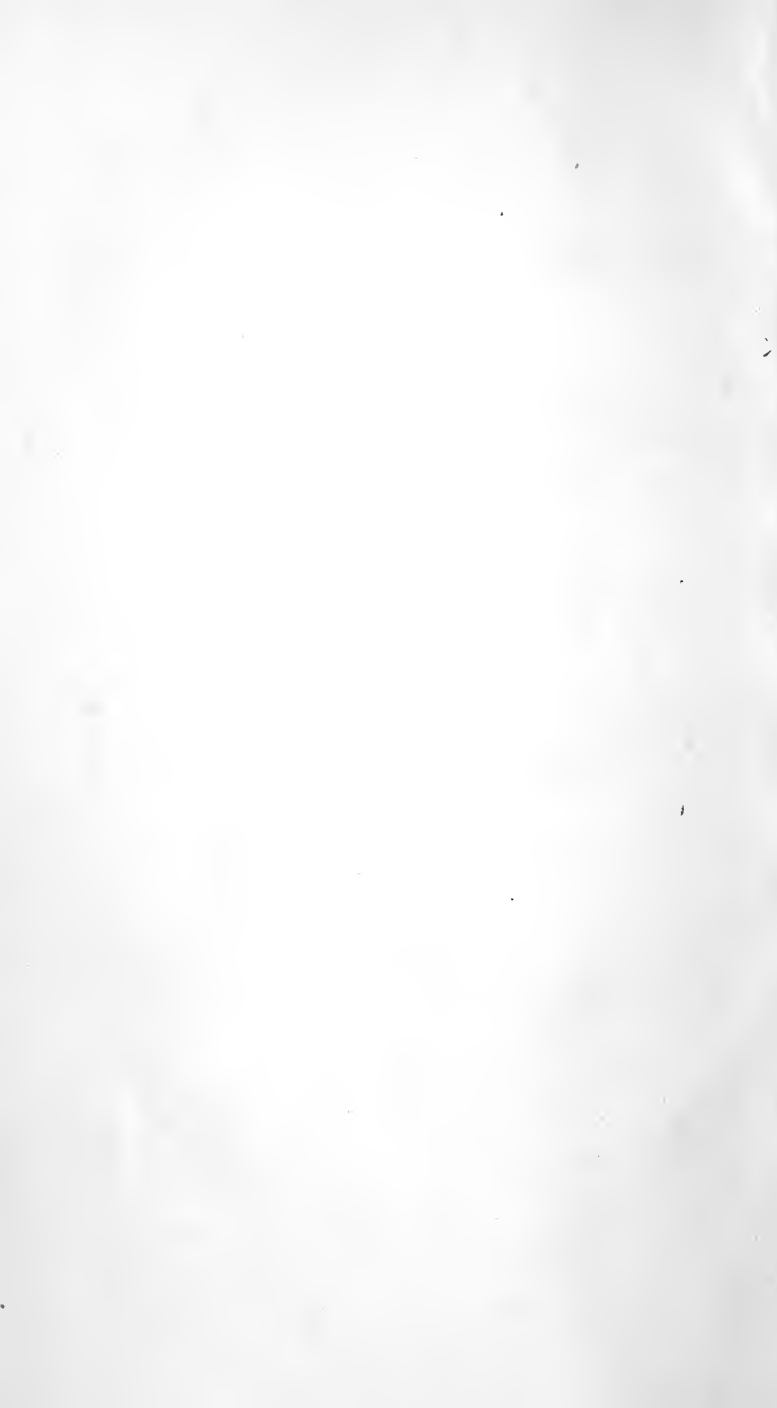
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A N

INAUGURAL DISSERTATION

ON THE

SCARLATINA ANGINOSA,

AS IT PREVAILED IN THIS CITY.

SUBMITTED TO THE PUBLIC EXAMINATION

OF THE

FACULTY OF PHYSIC,

UNDER THE AUTHORITY OF THE

TRUSTEES OF COLUMBIA COLLEGE

IN THE

STATE OF NEW-YORK:

WILLIAM SAMUEL JOHNSON, LL.D. President;

FOR THE DEGREE OF

DOCTOR OF PHYSIC;

ON THE THIRTIETH DAY OF APRIL, 1793.

By WILLETT TAYLOR, Junior,

Citizen of the State of New-York.

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Gul. Hamersley,

Med. Theoret. Professor.

T O
S A M U E L B A R D, M.D.

Dean of the Faculty of Phyfic
IN C O L U M B I A C O L L E G E,
N E W - Y O R K:

T H I S
D I S S E R T A T I O N

Is respectfully inscribed,

By his obliged Friend,

And humble Servant,

[The AUTHOR.]

SAMUEL BARNES, M.D.

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THE AUTHOR

AN
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SCARLATINA ANGINOSA,

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CONTAGIOUS diseases, from their first appearance, have proved so destructive to mankind, that any attempt to investigate their real nature, must be considered as not only laudable, but as a duty highly incumbent on those who are intrusted with the lives of their fellow citizens.

This disease has lately appeared as an epidemic in this city, and still continues so at the present time.

From the variety of appearances which it has assumed, it has engaged the attention of Physicians;

among

among whom there has been a difference of opinion; Some have supposed the fever, which accompanies this disease, to be of an inflammatory nature; whilst others have confidently asserted that it was a real *Typhus*.

I shall here attempt a description of the *Scarlatina Anginosa*, as it appeared in this city, with that diffidence which becomes a young Practitioner; not depending altogether upon my own judgment, but viewing it as sanctioned by men who are eminently distinguished in this department of science.

A description of this disease is not to be found in the writings of Hippocrates; and as the exanthematic fevers were only considered as varieties of febrile diseases, we consequently meet with no accurate account of the scarlet fever until the seventeenth century; because, previous to that period, medicine had never appeared in systematic form. Sydenham, in his writings, has described a fever under this name, but without any affection of the throat: his description may therefore answer to the *Scarlatina Simplex* of Doctor Cullen.

It

It is asserted, that, in the year 1689, it prevailed as an epidemic in London. Doctor Morton speaks of it in his *Pyretologia*. He thinks it differs from the measles only in the mode of eruption.

In the years 1748 and 1749, this disease raged at the Hague: it proved fatal to a great number of people. The fever was evidently typhus. Doctor De Haen describes it as it fell under his immediate observation, and relates several cases.—Unfortunately he practised blood-letting very freely, and was upon that account very unsuccessful in his treatment of the disease.

Sauvage describes a scarlet fever, attended with ulcerous fore throat, which prevailed at Montpellier in the year 1765. The disease was then, as it has generally been here, confined chiefly to children.

Other authors have described this disease. Withering speaks of it as inflammatory; Doctor Cullen seems to be of the same opinion, and terms it

Synocha

Synocha Contagiosa ; Doctor M'Bride conceives it to be sometimes inflammatory, at others nervous, or, in the language of exploded opinions, *putrid*.

In the month of July, 1792, the scarlet fever appeared in this city. It first discovered itself in some narrow streets near the North-River, where the houses were small, occupied by several families, and badly ventilated. From the indigent circumstances of those whom it chiefly affected, it was impossible they could pay that attention to cleanliness which was necessary for the preservation of their health. It was confined to this part of the city for some time; but at length it spread, and became more general and raged with peculiar violence in those parts of the city where the inhabitants were in the situation just described. It is also to be remarked, that as the cold weather approached, it gradually abated; and as the cold increased, it almost disappeared.

HISTORY *of the* DISEASE.

THIS disease generally began with anorexia, nausea, and sometimes vomiting; great lassitude, chilliness, and shivering: the patient soon complained of an head-ach; and a stiffness was commonly felt about the neck, with some uneasiness in the internal fauces. Upon looking into the mouth, the velum pendulum palati, tonsils, and uvula appeared of a red colour: as the redness increased, a number of white or ash-coloured spots made their appearance, which at length became as many ulcers. Deglutition was sometimes painful and difficult, the respiration quick and laborious; but the breath at this stage of the disease was not offensive: the tongue was covered with a white fur, and the mouth and fauces loaded with mucus. These symptoms were attended with some degree of coryza, but not so much as to prove troublesome. The patient was now affected with alternate chills and heats, the skin grew hot, and the pulse became rather hard and full. There was generally in the evening an exacerbation of the fever, and the patient grew restless, and sometimes delirious.

Upon the third or fourth day of the disease, the eruption made its appearance; the redness was first perceived on the face, neck and breast, and extended sometimes over the whole body, which became very turgid; at other times it was not so diffused; but very generally the extremities were affected, and the hands and fingers much swelled, and painful to the touch. I always found, that when the eruption on the surface of the body was in a trifling degree, the throat was much inflamed, and vice versa. Some Practitioners in this city assert that they have seen a *Scarlatina Simplex*, but in every case I have found it attended with some degree of *Cynanche*.

Upon the appearance of the efflorescence, the fever suffered very little remission; on the contrary, it frequently increased: the duration of the eruption was uncertain; its colour was generally changed to a brownish appearance in three or four days: the skin became rough, and a considerable desquamation took place; among some it was so great that a complete cuticular glove was taken off.

The eruption would often vary as to its appearance: sometimes it would appear in small points; at others, the skin would be smooth and equal; and now and then small phlogoses phlegmonodes discovered themselves, and ended in suppuration.

After the desquamation took place, the fever remitted, and a gentle sweat came on, which gave a further remission; the fauces looked better, the ulcerations soon healed, and the patient recovered his usual health.

I have now described the *Scarlatina Anginosa* as it appeared in its mild state. Several persons who had it in its gentlest form, fell into anasarous swellings, and had a hydrops pectoris. In confirmation of this assertion, I beg leave to observe, that from the dissections of people who have died of this disease, I can say from my own experience, that there have been serous effusions into the cavity of the bronchia, as well as into the thorax, which I apprehend may have occasioned suffocation; of which three or four cases have fell under my observation.

Although

Although the *Scarlatina* frequently terminated favourably, yet it often proved fatal, particularly to children. I shall now proceed to describe it as it appeared in its most dangerous form.

The sickness, which was not very great in the *Scarlatina Benigna*, proved very distressing to the patient in the *Scarlatina Maligna*, which was almost always attended with some degree of vomiting: the parotid and maxillary glands were considerably swelled, and often threatened suffocation: the coryza, which was scarcely perceptible in the one, was very considerably increased in the other: the nose, eyes and fauces discharged an acrid matter, which excoriated the nostrils and lips; passing also from the fauces into the œsophagus, it spread through the whole of the alimentary canal, occasioning diarrhœa.

The ulcers were very numerous, they put on a livid appearance, and the breath became very offensive. The efflorescence would sometimes entirely disappear, or turn to a dark or livid colour; the tongue was dry, and covered with a brownish scurf; the

the respiration small, hurried, and laborious, attended with anxiety, and great oppression about the præcordia: sometimes delirium from the beginning came on, and continued through the whole course of the disease, but generally did not make its appearance until the third or fourth day, and often not until a still later period: the eyes soon lost their lustre, looked glassy, and appeared to sink in their sockets: the patient complained of great thirst, and had a desire for acids. To these symptoms succeeded involuntary discharges of fæces and urine. The pulse from the beginning was small, frequent, and often irregular. All these symptoms increasing, the patient frequently became comatose, and in that state expired. Hiccough, and subultus tendinum, would frequently terminate the life of the patient.

Some persons, during the continuance of this disease, laboured under pneumonic affections. In some, the attack was preceded by cholera; but as they were accidental symptoms, they were treated as such. It has generally been observed in these cases, where the strength of the patient had been greatly

greatly exhausted from excessive evacuations, that by far the greater number of them proved fatal.

As our different modern writers have held different opinions respecting the nature of the fever attending *Scarlatina Anginosa*, I am induced to say something respecting it. Doctor Cullen places this disease in the class of Pyrexia, order of Exanthemata, genus Scarlatina. He makes two species. His definition is,

“ Quarto morbi die, facies aliquantum tumens;
 “ simul in cute passim rubor floridus, maculis am-
 “ plis, tandem coalescentibus, post tres dies in squa-
 “ mulas furfuraceas abiens; superveniente dein sæpe
 “ anasarca.”

Culleni Synopsis Nosologiæ Methodicæ, genus xxix.

The species are,

“ 1. Scarlatina (Simplex) nulla comitante Cy-
 “ nanche.

“ 2. Scarlatina (Cynanchica) cum Cynanche
 “ ulcerosa.”

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The fever evidently appears to me to be synochus, or typhus; the former I hold to be no more than a variety of the latter; and Doctor Cullen, after placing synochus as a genus, acknowledges that he thinks it only a variety of typhus. The variety of the fever seems to depend altogether upon the difference of constitution, climate, and other circumstances. Thus, if a person is of a full, robust habit, and of a sanguine temperament, he may be attacked with synochus, and the symptoms will appear to be inflammatory. On the contrary, if one of a delicate structure of body, or infirm make, should be seized with this disease, his fever will be, more properly speaking, typhus, from the peculiar state of his body acting as a predisposing cause.

Some authors contend, that the *Scarlatina Anginosa* is a disease specifically different from *Cynanche Maligna*; but this, certainly, does not seem to be the case: If there is a difference, it is only in degree; and this must depend altogether on the circumstances of constitution, &c. Doctor Cullen's objection to its being the same disease as *Cynanche Maligna*,

Maligna, is not satisfactorily established; for he supposes the difference to depend upon the symptoms being milder in *Scarlatina*; but I have seen patients attacked with *Scarlatina*, in whom the symptoms were so perfectly analogous to *Cynanche Maligna*, that no line of distinction could possibly be drawn between them. This has been the case with the greater number of the persons I have seen. Some persons, who were of a vigorous constitution, had a slight attack of the disease; but others, of a debilitated habit, were generally affected with every symptom peculiar to *Cynanche Maligna*. In illustration of what I have said, we may remark, that the small-pox will affect some people much more violently than others: Yet this difference does not depend upon a different specific contagion, but is merely a variety depending on constitution and other concurring circumstances.

I have said, in a former part of this Dissertation, that Sydenham describes a *Scarlatina Simplex*; and this Doctor Cullen brings as an argument in favour of its being different from *Cynanche Maligna*. But I now repeat, that every case of *Scarlatina* that has
come

come under my notice, has been marked with an affection of the throat. In some, the affection was so slight that it would have readily escaped common observation. Doctor Clarke, who has written very accurately on this disease, never met with a case unattended with *Cynanche*. He believes the two diseases to differ only in degree.

From such respectable authority, added to what observations I have made, I must think that they are one and the same disease; that the distinction is an improper one, and ought to be rejected.

C A U S E S.

THESE may be divided into REMOTE and PROXIMATE. The remote comprehends predisponent, and exciting or occasional causes. These are now to be described.

PREDISPONENT CAUSES.

PREDISPOSITION, according to Doctor Brown, is that state of the body which renders a person susceptible of the operation of the exciting or occasional cause. This state may be brought on, so as to favour the action of the exciting cause, by,

1. *The person's being accustomed to bad diet, or,*
2. *Scanty allowance of provisions.*
3. *Filling the stomach with a larger quantity of food than it can bear.*
4. *Fear, and other depressing passions.*
5. *Cold long continued, or combined with moisture.*
6. *Intoxication, occasioning debility.*
7. *Fatigue.*
8. *Any vicissitude of weather.*
9. *Intense application to study, and,*
10. *Night watching.*
11. *Too frequent evacuations.*
12. *Previous diseases, &c.*

In short, any thing that will have a tendency to debilitate the body gives a predisposition.

EXCITING

EXCITING CAUSES.

THE exciting cause of *Scarlatina* seems to be a specific contagion, arising from a person labouring under the same disease, or from such things as are impregnated with these effluvia; and these substances, so imbued, are called fomites.* It is observed, that, with respect to contagion, we know but little; that it appears to be of a sedative nature, and is generated by the living human body; that if it is long retained in the same place without being diffused in the atmosphere, it acquires a great degree of virulence; and if then applied to men's bodies, will produce a very dangerous disease. To confirm this opinion, we are desired to consult the writers on gaol and hospital fevers.

It deserves to be noticed of *this*, as of all other contagious diseases, that certain states of the atmosphere do unquestionably favour the propagation of *it*; and the increase and decrease of the disorder, together with the more mild or more virulent symptoms

* Cullen's First Lines of the Practice of Physic, vol. i.

symptoms which it has assumed, within the course of nine or ten months past, since its appearance in this city, according to the changes of weather, prove, beyond all doubt, the truth of the assertion.

PROXIMATE CAUSE.

A KNOWLEDGE of the proximate cause of diseases is essentially necessary to be understood by every Practitioner, as the cure immediately depends upon it.

From the lassitude, inactivity and prostration of strength, debility of the animal functions, weakness of the pulse, anorexia, nausea, vomiting, delirium, the impaired state of the vital energy; and lastly, from the manner in which the disease frequently terminates, are we not led to suppose *debility* the proximate cause? The different phænomena certainly evince it.

PROGNOSIS.

P R O G N O S I S.

WHEN the ulcers in the mouth and fauces were few; when they continued white, and did not assume a livid appearance; when the tumefaction of the throat was not great, if there was but little coryza, and a soft slow pulse, we might predict a favourable termination. Upon the appearance of the eruption, there was a remission of the fever; the desquamation taking place, the fever subsided altogether, and the ulcers healed kindly. But when the ulcers became livid, and were numerous; if the tongue was covered with a brown crust, the breath foetid, with considerable coryza; if the fever was typhus, with a small weak pulse, and great general debility, our prognosis was unfavourable.

METHOD

METHOD of CURE.

IN the beginning of the disease, if the action of the vessels appears to be strong, skin dry, countenance flushed, with few symptoms of debility, we must endeavour to reduce the pulse to such a standard as will justify our throwing in the bark. I generally found the administration of an emetic very serviceable. I preferred the tartar emetic, unless the intention was solely to remove crudities from the stomach, when I used ipecacuanha. The emetic tartar may be given in such doses as to excite full vomiting, or to nauseate; but as frequent vomiting sometimes brought on too great debility, I trusted chiefly to the last mentioned method, *i. e.* nauseating doses.

Warm bathing I found highly serviceable. When the water was only tepid it often brought on a gentle diaphoresis, which greatly relieved my patients. It may be applied to the whole body, or to the extremities only. Partial bathing answered every purpose.

Acids

Acids are useful through every stage of this disease, but particularly in the beginning, on account of their refrigerant quality. Laxatives, such as the neutral salts, were administered to keep the bowels moderately open.

In this stage of the disease, some Physicians have advised and practised blood-letting; but *this*, like almost every other contagious disease, did not well bear the loss of blood, as it frequently increased the symptoms of debility very suddenly; for which reason I never attempted it. If at any time this evacuation should be indicated, the lancet ought certainly to be used very cautiously.

In many cases this disease was attended with typhus fever from its first appearance; and in some others it soon assumed this form. In these I immediately employed tonics and stimulants. The tonic which I found to be the best, was the Peruvian bark. Although it has been rejected by some Physicians, it is certainly one of the best medicines we are acquainted with. It may be exhibited in powder or infusion. Sometimes the irritability of

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the stomach was so great that it could not be retained either way: I then administered it by clyster, previously emptying the bowels with an injection of vinegar. Some children have derived great benefit from the use of the bark waistcoat.

Porter, from its containing a great deal of fixed air, must undoubtedly be considered as an excellent tonic, and upon that account ought to be used freely.

Cold has been mentioned by some medical men as an useful tonic; they admitted it to their patients. This practice I hold to be very erroneous; and whoever will consult the writings of Doctor Brown on the subject, will immediately perceive that it is a direct sedative, and highly improper in asthenic diseases.

Cold applications may also be considered, in many cases, as very injurious, by checking the eruption. Cases of this kind have occurred, where it has really brought on convulsions, and ended fatally. Instead, then, of cold, fresh air ought to be

be admitted in the patient's chamber, for the purpose of ventilation; and in the winter season, a fire may be kept in the apartment of the sick.

Cleanliness ought to be strictly attended to. The bed-clothes and body linen should be frequently changed, all excrementitious matter removed, and the apartment of the patient sprinkled with vinegar, which will remove that noxious smell so common in the advanced stage of this disease.

We come now to the different stimuli that are advised; and the first that claims our attention is wine. This is almost always grateful to the patient, and sits easy upon his stomach. It ought to be given pure, and the quantity must depend upon circumstances. I first tried it in small portions, gradually enlarging the dose as the patient could bear it. Good Port wine was sometimes used. Some people, after continuing the use of wine for a few days, took a dislike to it: I then changed the stimulus, and gave brandy, or spirits, diluted with water.

In a few cases, the patient rejected every thing that was received into the stomach, excepting now and then milk punch, which was retained. Fomentations and rubefacients, applied to the abdomen, frequently removed this irritability.

It has been said, that the volatile alkali is of little use in diseases where the patient is much weakened; but in *Scarlatina* I have found it very serviceable. It ought to be given in large doses; combined with the spirits of lavender compound, it proved an excellent cordial.

Opium is next to be mentioned. In small doses it is stimulant. It ought to be given in solution, such as the tinctura thebaica. Ten or fifteen drops should be given every two or three hours. When the patient is in a continual state of watching, and has restless nights, in order to procure sleep we may give from forty to sixty drops. This I frequently found had the desired effect, and refreshed the sick exceedingly.

Through the whole course of the disease we ought to attend particularly to the patient's diet:

It

It should be nutritious. Good beef-steak broth, or the juice of broiled meat expressed and well seasoned, may be given, beginning with small quantities often repeated.

The patient's bowels must also be attended to : They ought to be emptied once in twenty-four hours, by a clyster, if necessary.

Where the debility is very great, bark injections ought to be thrown in. Fomentations of spirits should be applied to the extremities, and stimulating cataplasms to the feet.

When the throat and fauces are much swelled, the linamentum volatile (composed of olive oil and volatile alkali) may be frequently rubbed upon the parts affected. With respect to blisters, I think there is some danger in their application, as they are sometimes succeeded by gangrene. I have seen three or four cases where they produced mortification, and occasioned death. If they are applied, they ought to remain no longer on the throat than to act as rubefacients. But the volatile alkali answers every purpose.

The

The mouth and fauces should be frequently washed with astringent gargles, such as infusion or decoction of the bark, with elixir vitriol, a solution of white vitriol, allum, rose water, &c.

The anafarcous swellings which sometimes succeeded the *Scarlatina Anginosa*, I found relieved by purgatives and diuretics; at the same time the patient may take the Peruvian bark, and use such exercise as his strength will admit of.

I have now finished the history and cure of the *Scarlatina Anginosa*. If it is inaccurate, I hope I shall be excused, as the want of time has prevented my paying the attention to it which I could have wished. However, I trust it will be found that I have attended to the most essential circumstances of this disease.

F I N I S.





